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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Application No. Applicant(s) 10/593,499 YALURIS ET AL. Office Action Summary Examiner Art Unit JENNIFER A. LEUNG 1797

The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MALING DATE OF THIS COMMUNICATION. E-tensors of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SR (b) (MONTH'S from the making date of this communication. Failure to reply within the set or redended period for reply will by stating, cause the application to become MacMOND-ED (SR USC. § 133). Any reply received by the Office later than three months after the making date of this communication, even if timely filed, may reduce any earned period for the communication. Failure to reply with the set of the Ciffice later than three months after the making date of this communication, even if timely filed, may reduce any earned period for the communication.
Status
1) Responsive to communication(s) filed on 15 January 2010.
2a) This action is FINAL. 2b) This action is non-final.
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.
Disposition of Claims
4) ⊠ Claim(s) <u>1-85</u> is/are pending in the application. 4a) Of the above claim(s) <u>47-56 and 68-70</u> is/are withdrawn from consideration. 5) □ Claim(s) is/are allowed. 6) ☒ Claim(s) <u>1-46.57-67 and 71-85</u> is/are rejected. 7) □ Claim(s) is/are objected to. 8) □ Claim(s) are subject to restriction and/or election requirement.
Application Papers
9) The specification is objected to by the Examiner. 10) The drawing(s) filed on 20 September 2006 is/are: a) accepted or b) b objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.
Priority under 35 U.S.C. § 119
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) II b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No
Alachmonte

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s)/Mail Date. _ Notice of Draftsperson's Patent Drawing Review (PTO-948)
 Information Disclosure Statement(s) (PTO/SB/08) 5) Idotice of Informal Patent Application Paper No(s)/Mail Date 9/25/07. 6) Other: ___

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DETAILED ACTION

Election/Restrictions

- Applicant's election with traverse of Group I, claims 1-46, 57-67 and 71-85, in the reply filed on January 15, 2010 is acknowledged. The traversal is on the ground(s) that the inventions in Groups I and II are not restrictable, per 37 CFR §1.475(b). This argument, however, is not found persuasive. As stated in MPEP §1850, under PCT Rule 13 (with emphasis added).
 - "13.1 The international application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept ("requirement of unity of invention")."
 - "13.2 Where a group of inventions is claimed in one and the same international application, the requirement of unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression "special technical features" shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art,"

Furthermore, as stated in MPEP §1850, Heading III. A (with emphasis added),

"... an apparatus or means shall be considered to be specifically designed for carrying out a claimed process if the contribution over the prior art of the apparatus or means corresponds to the contribution the process makes over the prior art. Consequently, it would not be sufficient that the apparatus or means is merely capable of being used in carrying out the claimed process. However, the expression "specifically designed" does not imply that the apparatus or means could not be used for carrying out another process, nor that the process could not be carried out using an alternative apparatus or means."

In the instant case, unity exists *a priori* between the apparatus of Group I and the process of Group II. The technical feature common to both the apparatus and the process is the loading of

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particulate material into a unit with the aid of vacuum, and the discharging of particulate matter from the unit with the aid of pressure. However, this technical feature is known in the art, as evidenced by the prior art cited in the International Search Report to Levine et al., Bartholic, Harpham and Evans, as well as the prior art to Freeman. Therefore, unity is lacking a posteriori because there is no "special technical feature" common to all the claims (i.e., no common technical feature which makes a contribution over the prior art).

The requirement is still deemed proper and is therefore made FINAL.

Claims 47-56 and 68-70 are withdrawn from consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

 Claims 1-45, 58-67 and 71-85 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, it is unclear as to whether the "fluidized catalytic cracking unit" should be considered as part of the claimed system. The preamble of the claim suggests that the fluidized catalytic cracking unit is <u>not</u> part of the claimed system (i.e., it is recited as intended use, as set forth by the term "for"), whereas the body of the claim suggests that the fluidized catalytic cracking unit is part of the claimed system (i.e., in view of the limitation, "the transfer port being in fluid communication with the fluidized catalytic cracking unit" in lines 9-10).

Regarding claim 18, it is unclear as to whether the "fluidized catalytic cracking unit"

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should be considered as part of the claimed system. The preamble of the claim suggests that the fluidized catalytic cracking unit is <u>not</u> part of the claimed system (i.e., it is recited as intended use, as set forth by the term "for"), whereas the body of the claim suggests that the fluidized catalytic cracking unit is part of the claimed system (i.e., in view of the limitation, "the loading unit being *in fluid communication with...* the fluidized catalytic cracking unit" in lines 4-5).

Regarding claim 23, "the load cells" (in line 3) lack proper positive antecedent basis.

Regarding claim 32, it is unclear as to whether the "fluidized catalytic cracking unit" should be considered as part of the claimed system. The preamble of the claims suggests that the fluidized catalytic cracking unit is <u>not</u> part of the claimed system (i.e., it is recited as intended use, as set forth by the term "for"), whereas the body of the claim suggests that the fluidized catalytic cracking unit is part of the claimed system (i.e., in view of the limitation, "a loading unit in fluid communication with... the fluidized catalytic cracking unit" in lines 5-6).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
- Claims 1, 4, 6, 8, 9, 11, 15-22, 24, 26, 27, 31, 46 and 57 are rejected under 35
 U.S.C. 102(b) as being anticipated by Freeman (US 4,005,908).

Regarding claim 1, Freeman (FIG. 1) discloses an apparatus comprising: a dust collector

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(i.e., filter assembly 64) in fluid communication with a storage bin (10); a vacuum producer (i.e., pump 120) in fluid communication with the dust collector for generating a vacuum within the dust collector to draw material into the dust collector (see column 3, lines 55-59; column 4, lines 28-45); and a transfer pot (i.e., defined by cylindrical wall 48 and bottom section 46) in fluid communication with the dust collector for receiving material from the dust collector, the transfer pot being in fluid communication with a point of use for the material (i.e., via conduit 116) and a source of pressurized air (i.e., supplied by lines 130, 112, via pump 120).

Although Freeman does not disclose that the point of use comprises, specifically, a fluidized catalytic cracking unit, the unit has not been considered an element of the claimed apparatus. Note the recitation of an intended use of the system "for injecting catalyst and/or additives into a fluidized catalytic cracking unit" in the preamble of the claim. MPEP § 2111.02. The apparatus of Freeman would be capable of performing the intended use as recited in the preamble, and therefore the apparatus meets the claim. In addition, the recitations with respect to the manner of operating the apparatus or the materials worked upon by the apparatus do not impart patentable weight to the claim. MPEP § 2114, 2115.

Regarding claim 4, the dust collector comprises a filter (see FIG. 3; column 2, line 45 to column 3, line 12) in fluid communication with the vacuum producer (i.e., via line 124), so that the filter collects dust from within the dust collector.

Regarding claim 6, a plurality of load cells (i.e., labeled "scales") measure the weight of the dust collector, transfer pot and material drawn into the dust collector.

Regarding claim 8, the dust collector comprises a substantially cylindrical upper portion (i.e., including annular base section 66) and an adjoining, substantially conical lower portion

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(i.e., tapered section 50); and the transfer pot comprises a substantially cylindrical upper portion (i.e., cylindrical section 48) and a substantially conical lower portion (i.e., bottom section 46) adjoining the upper portion of the transfer pot.

Regarding claim 9, the lower portion (50) of the dust collector has an opening formed therein for permitting material to flow from the dust collector to the transfer pot.

Regarding claim 11, the lower portion (46) of the transfer pot (44) has an opening for permitting material to be transferred from the transfer pot to a point of use (i.e., via conduit 116).

Regarding claims 15-17, the dust collector and transfer pot each comprise a respective sidewall; the storage bin and dust collector are non-adjoining; and the dust collector adjoins the transfer pot (see FIG. 1).

Regarding claim 18, Freeman (see FIG. 1) discloses an apparatus comprising: a storage bin (10) at a first location; and a loading unit (i.e., comprising batching vessel 44 and filter assembly 64) positioned in a second location remote from the first location;

wherein the loading unit is in fluid communication with the storage bin (i.e., via conduit 53) and a point of use (i.e., via conduit 116) on a selective basis (i.e., by manipulation of, e.g., valves 55, 118); and wherein the loading unit is capable of being evacuated (i.e., via conduit 124 and pump 120) so that a resulting vacuum within the loading unit draws material from the storage bin, and the loading unit is capable of being pressurized (i.e., by supplying air via pump 120 and conduits 130, 112, and manipulation of valves), so that material may be transferred to its point of use; (see column 3, lines 55-59; column 4, lines 28-45).

Although Freeman does not disclose that the point of use comprises, specifically, a fluidized catalytic cracking unit, the unit has not been considered an element of the claimed

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apparatus. Note the recitation of an intended use of the system "for storing and loading catalyst and/or additives into a fluidized catalytic cracking unit" in the preamble of the claim. The apparatus of Freeman would be capable of performing the intended use as recited in the preamble, and therefore the apparatus meets the claim. In addition, the recitations with respect to the manner of operating the apparatus or the materials worked upon by the apparatus do not impart patentable weight to the claim.

Regarding claims 19, 27 and 31, the loading unit comprises a dust collector (i.e., filter assembly 64) and a transfer pot (i.e., defined by cylindrical wall 48 and bottom section 46), wherein the dust collector and the transfer pot each comprise a respective sidewall (see FIG. 1); and wherein the dust collector adjoins the transfer pot. (see FIG. 1).

Regarding claim 20, the apparatus comprises a vacuum producer (i.e., pump 120; FIG. 1), capable of evacuating the loading unit.

Regarding claim 21, the dust collector comprises a filter (see FIG. 3; column 2, line 45 to column 3, line 12) in fluid communication with the vacuum producer (i.e., via line 124), capable of collecting dust generated by the transfer of material from the storage bin (10).

Regarding claim 22, a plurality of load cells (i.e., labeled "scales"; see column 5, lines 43-55) measure a weight of the loading unit and the material within the loading unit.

Regarding claim 24, the dust collector comprises a substantially cylindrical upper portion (i.e., including annular base section 66) and an adjoining, substantially conical lower portion (i.e., tapered section 50); and the transfer pot comprises a substantially cylindrical upper portion (i.e., cylindrical section 48) and a substantially conical lower portion (i.e., bottom section 46) adjoining the upper portion of the transfer pot.

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Regarding claim 26, the lower portion (46) of the transfer pot has an opening for permitting material to be transferred from the transfer pot to a point of use (i.e., via conduit 116).

Regarding claims 46 and 57, Freeman (see FIG. 1) discloses an apparatus comprising: dust collecting means (i.e., filter assembly 64) in fluid communication with a storage bin (10) for holding a particulate substance; vacuum producing means (i.e., pump 120) in fluid communication with the dust collecting means so that the vacuum producing means draws the particulate substance into the dust collecting means (see column 3, lines 55-59; column 4, lines 28-45); and means (i.e., a transfer pot defined by cylindrical wall 48 and bottom section 46) for receiving the particulate substance from the dust collecting means and injecting the substance into a point of use (i.e., via conduit 116, with the aid of pressurization by the air supplied in lines 130, 112 and via pump 120). The elements in the apparatus are considered equivalents of the "means" defined in Applicant's disclosure under 35 U.S.C. 112, sixth paragraph.

Although Freeman does not disclose that the point of use comprises, specifically, a fluidized catalytic cracking unit or a fluid stream, the fluidized catalytic cracking unit and the fluid stream have not been considered elements of the claimed apparatus. Note their recitation as an intended use of the system in the preamble of the claims. The apparatus of Freeman would be capable of performing the intended use as recited in the preamble, and therefore the apparatus meets the claim. Also, the recitations with respect to the manner of operating the apparatus or the materials worked upon by the apparatus do not impart patentable weight to the claim.

 Claims 32, 33 and 41 rejected under 35 U.S.C. 102(e) as being anticipated by Evans (US 6.974.559).

Evans (see FIG. 5; column 6, lines 33-67; column 5, line 25 to column 6, line 32)

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discloses an apparatus comprising: a first bin (i.e., vessel 440) for storing a first catalyst and/or additive; a second bin (i.e., vessel 510) for storing a second catalyst and/or additive; a loading unit (i.e., pressure vessel 420) in fluid communication with the first and second bins and a fluidized catalytic cracking unit (424); a first valve (432) for isolating the first bin from the loading unit on a selective basis; a second valve (520) for isolating the second bin from the loading unit on a selective basis; and a third valve (426) for isolating the loading unit from the fluidized catalytic cracking unit on a selective basis. Evans further discloses a manifold (530) comprising the first and second valves; and a controller (404) electrically coupled to respective actuators of the first, second and third valves (see also column 3, line 44 to column 4, line 15).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(c), (f) or (g) prior art under 35 U.S.C. 103(a).

 Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (US 4.005.908) in view of Gieseler (US 1.385.870). Art Unit: 1797

Freeman discloses a conduit (54) equipped with a flexible coupling (157) for connecting the dust collector and the storage bin, so that the dust collector and storage bin are in fluid communication (see column 2, lines 39-44; column 5, lines 50-55). The apparatus further comprises a first valve (55) for isolating the dust collector (64) from the storage bin (10) on a selective basis. Freeman, however, does not specifically disclose the use of a "hose" for providing the fluid communication. In any event, the selection of a hose, as an alternative to the conduit with the flexible coupling, for providing fluid communication between the vessels would have been considered conventional to those having ordinary skill in the art, as evidenced by Gieseler (e.g., hose 5 providing fluid communication between bin 1 and dust collector 6; FIG. 1).

 Claims 14, 29, 30, 32-39, 41-45, 58, 62, 73 and 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (US 4,005,908) in view of Krambrock et al. (US 4,301,880).

Regarding claims 14, 29 and 30, Freeman fails to disclose another hose and another storage bin, or a manifold coupled in fluid communication with the dust collector and hoses for placing the hoses in fluid communication with the dust collector on a selective basis. Krambrock et al., however, teaches a conventional apparatus for transferring bulk materials (see FIG. 4, mistakenly described as FIG. 2 in column 3, line 58 to column 4, line 11; alternatively, FIG. 5, mistakenly described as FIG. 3 in column 4, lines 12-21), said apparatus comprising a dust collector, a first bin for storing a first material, a second bin for storing a second material, a first valve (18) for isolating the first bin from the dust collector on a selective basis and a second valve (19) for isolating the second bin from the dust collector on a selective basis; wherein a manifold (see FIG. 4, 5) comprises the first and second valves. It would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the recited second

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bin, second valve and manifold in the apparatus of Freeman, on the basis of suitability for the intended use thereof, in order to allow for the conveyance of bulk materials from a plurality of sources to a single destination, as taught by Krambrock et al. In any event, the duplication of parts was held to be obvious. See MPEP 2144.04.

Regarding claims 32-34, 36 and 37, Freeman (FIG. 1) discloses an apparatus comprising: a first bin (10); a loading unit comprising a dust collector (i.e., filter assembly 64) and a transfer pot (i.e., defined by cylindrical wall 48 and bottom section 46), said loading unit being in fluid communication with the first bin and a point of use for the material (i.e., via conduit 116); a first valve (55) for isolating the first bin from the loading unit on a selective basis; and a third valve (118) for isolating the loading unit from the point of use for the material on a selective basis.

The loading unit is capable of maintaining a vacuum therein so that material can be drawn into the dust collector from the first bin (10) by the vacuum (see column 3, lines 55-59; column 4, lines 28-45), and the transfer pot is capable of being pressurized (i.e., via air supplied by lines 130, 112, via pump 120), so that the material may be injected to the point of use.

Although Freeman does not disclose that the point of use comprises, specifically, a fluidized catalytic cracking unit, the unit has not been considered an element of the claimed apparatus. Note the recitation of an intended use of the system "for loading catalyst and/or additives into a fluidized catalytic cracking unit" in the preamble of the claim. The apparatus of Freeman would be capable of performing the intended use as recited in the preamble, and therefore the apparatus meets the claim. In addition, the recitations with respect to the manner of operating the apparatus or the materials worked upon by the apparatus do not impart patentable weight to the claim.

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The apparatus of Freeman is the same as the claimed apparatus, except that Freeman fails to specifically disclose a second bin for storing a second material, wherein a second valve isolates the second bin from the loading unit on a selective basis. Freeman also does not disclose a manifold comprising the first and second valves.

Krambrock et al., however, teaches a conventional apparatus for transferring bulk materials (see FIG. 4, mistakenly described as FIG. 2 in column 3, line 58 to column 4, line 11; alternatively, FIG. 5, mistakenly described as FIG. 3 in column 4, lines 12-21), said apparatus comprising a dust collector, a first bin for storing a first material, a second bin for storing a second material, a first valve (18) for isolating the first bin from the dust collector on a selective basis and a second valve (19) for isolating the second bin from the dust collector on a selective basis; wherein a manifold (see FIG. 4, 5) comprises the first and second valves.

It would have been obvious for one of ordinary skill in the art at the time the invention was made to provide a second bin, second valve and manifold in the apparatus of Freeman, on the basis of suitability for the intended use thereof, in order to allow for the conveyance of bulk materials from a plurality of sources to a single destination, as taught by Krambrock et al. In any event, the duplication of parts was held to be obvious. See MPEP 2144.04.

Regarding claim 35, although Freeman does not specifically disclose that the conduit (53 in FIG. 1) comprises a "hose" for coupling the bin to the loading unit, the examiner takes

Official Notice that the use of hoses for providing fluid communication between vessels would have been considered conventional to those having ordinary skill in the art.

Regarding claim 38, Freeman discloses a vacuum producer (i.e., pump 120; FIG. 1) for generating the vacuum within the loading unit.

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Regarding claim 39, Freeman discloses that the dust collector comprises a filter (FIG. 3; column 2, line 45 to column 3, line 12) for collecting dust generated by the transfer of material.

Regarding claim 41, Freeman discloses a controller, electrically coupled to the first and third valves (see box labeled CONTROL in FIG. 1). It would have been obvious for one of ordinary skill in the art at the time the invention was made to similarly couple the second valve to the controller in the modified apparatus of Freeman, in order to provide for automated control of the entire material transfer process.

Regarding claims 42, 43 and 45, Freeman discloses that the dust collector comprises a substantially cylindrical upper portion (i.e., including annular base section 66) and an adjoining, substantially conical lower portion (i.e., tapered section 50); and the transfer pot comprises a substantially cylindrical upper portion (i.e., cylindrical section 48) and a substantially conical lower portion (i.e., bottom section 46) adjoining the upper portion of the transfer pot; said transfer pot and said dust collector each comprising a respective sidewall; and said dust collector adjoining the transfer pot.

Regarding claim 44, Freeman discloses that the first bin (10) and the loading unit are non-adjoining (see FIG. 1). Krambrock et al. similarly teaches that the first and second bins should be non-adjoining with the loading unit (see FIGs. 4, 5).

Regarding claims 58, 62, 73 and 80, Krambrock et al. further teaches a first pipe guide (i.e., conduit 11, FIG. 4; conduit 26, FIG. 5) in fluid with the first storage bin and a second pipe guide (i.e., conduit 12, FIG. 4; conduit 27, FIG. 5) in fluid communication with the second storage bin. The first ends, respectively, of the first and second pipe guides are secured to a wall of a dust collector. The first valve is mounted on the first pipe guide for placing the dust

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collector in fluid communication with the first storage bin on a selective basis and the second valve is mounted on the second pipe guide for placing the dust collector in fluid communication with the second storage bin on a selective basis. It would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the recited first and second pipe guide configuration in the modified apparatus of Freeman, because the configuration would allow for several components of loose material to be fed to the dust collector without impairing weighting accuracy, as taught by Krambrock et al. (see column 1, line 5 to column 2, line 11).

8. Claims 5 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (US 4,005,908) in view of Harpham (WO 00/48723); and claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (US 4,005,908) in view of Krambrock et al. (US 4,301,880), as applied to claims 32 and 34 above, and further in view of Harpham (WO 00/48723).

Regarding claims 5 and 40, Freeman fails to disclose a volume chamber and a moisture trap for drying the air. Harpham, however, teaches that when compressed air is used as the conveying medium, a dehumidifying apparatus may be connected before or after the compressor, if the material being conveyed is sensitive to moisture (see page 4, lines 12-13). It would have been obvious for one of ordinary skill in the art at the time the invention was made to provide a volume chamber/moisture trap for drying the air used to pressurize the loading unit in the apparatus of Freeman, because such means would have prevented the moisture in the air from affecting a moisture sensitive material being conveyed by the apparatus, as taught by Harpham. The examiner further takes Official Notice that a volume chamber/moisture trap would have been considered a conventional dehumidifying apparatus in the art.

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Regarding claim 28, Freeman is silent as to the second location being no more than approximately twenty feet from the first location. In any event, it would have been an obvious design choice for one of ordinary skill in the art at the time the invention was made to configure the second location to be no more than approximately twenty feet away from the first location in the apparatus of Freeman, on the basis of suitability for the intended use and absent a showing of unexpected results thereof, e.g., in order to minimize the amount of space occupied by the system. Furthermore, the claimed distance would have been considered conventional in the art (see Harpham, page 4, line 19 to page 5, line 3).

 Claims 7, 23, 71 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (US 4,005,908) in view of Carter (US 3,542,091).

Regarding claims 7 and 23, Freeman discloses that the loading unit is mounted on a plurality of legs (56, 58, 60, 62; see column 2, lines 36-39), wherein the legs are mounted on the load cells (i.e., "scales"). Freeman, however, fails to disclose a cabinet for housing the dust collector and transfer pot. In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide a cabinet for housing the loading unit in the apparatus of Freeman, because the provision of a cabinet for housing solids handling equipment, for preventing contamination of the solids being handled, as well as the surrounding environment, would have been considered conventional to one having ordinary skill in the art, as evidenced by Carter (e.g., housing 2, FIGs. 1, 2).

Regarding claims 71 and 72, the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. The modified apparatus of Freeman, with a cabinet, would be capable of functioning as a shipping container.

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Claims 1-4, 8, 9, 11, 15-21, 24, 26, 27, 31, 46 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reuter (US 3,632,173) in view of Markham et al. (US 3,591,525).

Regarding claims 1-4, Reuter (FIG. 9; column 9, lines 13-24) discloses an apparatus comprising: a hopper (200) and a transfer pot (i.e., container 10) in fluid communication with the hopper for receiving a material from the hopper; said transfer pot also in fluid communication with a point of use (i.e., catalyst regenerator tower 236) and a source of pressurized air (i.e., via gas inlet 25) so that the material can be transferred to the point of use. Reuter, however, is silent as to the hopper (200) being configured as a dust collector according to the recited configuration, wherein the dust collector is provided in fluid communication with at least one storage bin via a hose comprising a valve, and wherein a vacuum producer generates a vacuum within the dust collector for drawing the material from the at least one storage bin into the dust collector.

Markham et al., however, teaches an apparatus comprising a dust collector (i.e., a hopper 3 with a filter 7; Figure) and a transfer pot (i.e., second closed hopper 8) in fluid communication with the dust collector for receiving a material from the dust collector. The apparatus further comprises a vacuum producer (i.e., an ejector 4, powered by pressurized air via line 5) in fluid communication with the filter for generating a vacuum within the dust collector and for drawing a material from a storage bin (1) via a hose (i.e., flexible pipe 2) into the dust collector. A valve (see figure, not labeled) is coupled to the hose.

It would have been obvious for one of ordinary skill in the art at the time the invention was made to configure the hopper (200) in the apparatus of Reuter as a dust collector according to the recited configuration, because the use of such configuration would enable the hopper to be refilled with materials from a remotely located storage bin, without the discharge of material into

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the atmosphere, as evidenced by Markham et al.

Although Reuter does not disclose that the point of use (i.e., catalyst regenerator tower 236; FIG. 9) comprises part of a fluidized catalytic cracking unit, the unit has not been considered an element of the claimed apparatus. Note the recitation of an intended use of the system "for injecting catalyst and/or additives into a fluidized catalytic cracking unit" in the preamble of the claim. The modified apparatus of Reuter would be capable of performing the intended use as recited in the preamble, and therefore the apparatus meets the claim. In addition, the recitations with respect to the manner of operating the apparatus or the materials worked upon by the apparatus do not impart patentable weight to the claim.

Regarding claim 8, Reuter discloses that the hopper (200) comprises a substantially cylindrical upper portion and an adjoining, substantially conical portion (see FIG. 9); and the transfer pot (10) comprises a substantially cylindrical upper portion adjoining the lower portion of the hopper, and a substantially conical lower portion adjoining the upper portion of the transfer pot (see FIG. 1, 9). Markham et al. similarly teaches vessels possessing the recited shapes (see figure). Accordingly, it would have been obvious for one of ordinary skill in the art at the time the invention was made to configure the dust collector and the transfer pot in the modified apparatus of Reuter to possess the recited shapes.

Regarding claim 9, Reuter (see FIG. 9) discloses that the lower portion of the hopper (200) has an opening formed therein, for permitting transfer of material to the transfer pot (10).

Regarding claim 11, Reuter (see FIG. 9) discloses that the lower portion of the transfer pot (10) has an opening formed therein (i.e., at pick up end 28a; FIG. 1) for permitting material to flow from the transfer pot (10) to the point of use (236).

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Regarding claims 15 and 17, Reuter (see FIG. 9) discloses that the hopper (200) and the transfer pot (10) each comprise a respective sidewall; wherein the hopper (200) adjoins the transfer pot (10) via a flexible nipple (19).

Regarding claim 16, Markham et al. further teaches that the storage bin (1) and the dust collector (3,7) are non-adjoining (see figure).

Regarding claims 18-21, Reuter (FIG. 9) discloses an apparatus comprising: a loading unit including a hopper (200) and a transfer pot (10), wherein the loading unit may be placed in fluid communication with a point of use (i.e., catalyst regenerator tower 236) on a selective basis; said loading unit being capable of being pressurized (i.e., with gas via line 25) so that the material in the loading unit is transferred to the point of use.

The apparatus of Reuter is the same as the claimed apparatus, except that Reuter is silent as to the hopper (200) being configured as a dust collector according to the recited configuration, wherein the dust collector is provided in fluid communication with a storage bin, and wherein a vacuum producer is in fluid communication with the filter of the dust collector and evacuates the dust collector for drawing the material from the storage bin into the dust collector.

Markham et al., however, teaches an apparatus comprising a dust collector (i.e., hopper 3 with filter 7; see Figure) and a transfer pot (i.e., hopper 8) in fluid communication with the dust collector for receiving a material from the dust collector. A vacuum producer (i.e., an ejector 4, powered by pressurized air via line 5) is in fluid communication with the filter for generating a vacuum within the dust collector and for drawing a material from a storage bin (1) into the dust collector (i.e., via valved flexible pipe 2).

It would have been obvious for one of ordinary skill in the art at the time the invention

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was made to configure the hopper (200) in the apparatus of Reuter as a dust collector according to the recited configuration, because the use of such configuration for enabling a hopper to be refilled with materials from a remotely located storage bin, without the discharge of material into the atmosphere, would have been considered conventional in the art of material transport, as evidenced by Markham et al.

Although Reuter does not disclose that the point of use (i.e., catalyst regenerator tower 236; FIG. 9) comprises part of a fluidized catalytic cracking unit, the unit has not been considered an element of the claimed apparatus. Note the recitation of an intended use of the system "for storing and loading catalyst and/or additives into a fluidized catalytic cracking unit" in the preamble of the claim. The modified apparatus of Reuter would be capable of performing the intended use as recited in the preamble, and therefore the apparatus meets the claim. In addition, the recitations with respect to the manner of operating the apparatus or the materials worked upon by the apparatus do not impart patentable weight to the claim.

Regarding claim 24, Reuter discloses that the hopper (200) comprises a substantially cylindrical upper portion and an adjoining, substantially conical portion (see FIG. 9); and the transfer pot (10) comprises a substantially cylindrical upper portion adjoining the lower portion of the hopper, and a substantially conical lower portion adjoining the upper portion of the transfer pot (see FIG. 1 and 9). Markham et al. similarly teaches vessels possessing the recited shapes (see figure). Accordingly, it would have been obvious for one of ordinary skill in the art at the time the invention was made to configure the dust collector and the transfer pot in the modified apparatus of Reuter to possess the recited shapes.

Regarding claim 26, Reuter (see FIG. 9) discloses that the lower portion of the transfer

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pot (10) has an opening formed therein (i.e., at pick up end 28a; FIG. 1) for permitting material to flow from the transfer pot (10) to the point of use (236).

Regarding claims 27 and 31, Reuter (see FIG. 9) discloses that the hopper (200) and the transfer pot (10) each comprise a respective sidewall; wherein the hopper (200) adjoins the transfer pot (10) via a flexible nipple (19).

Regarding claims 46 and 57, the same comments with respect to Reuter and Markham et al. apply (see comments for claims 1 and 18). The elements in the modified apparatus of Reuter are considered equivalents of the "means" defined in Applicant's disclosure under 35 U.S.C. 112, sixth paragraph.

11. Claims 10 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reuter (US 3,632,173) in view of Markham et al. (US 3,591,525), as applied to claims 1, 8, 9, 19 and 24 above, and in further view of Kennedy et al. (US 2,032,367).

Reuter discloses that the lower portion hopper (200) has an opening permitting material to flow from the hopper to the transfer pot (10). A valve (18, 18a) covers the opening on a selective basis. Reuter, however, is silent as to the valve comprising a plug movable between an upper and a lower position in response to impingement of pressurized air thereon.

Kennedy et al. teaches a valve for covering the opening between two vessels (i.e., container 1 and bin 2; FIGs. 1, 2) on a selective basis, wherein the valve comprises a plug (i.e., actuating gate 77; FIGs. 2-4) movable between an upper position (in FIGs. 3, 4) and a lower position (in FIG. 2) in response to impingement of pressurized air (i.e., from fluid pressure supply pipe 26) thereon. (see also page 2, column 1, line 36 to column 2, line 27).

It would have been obvious for one of ordinary skill in the art at the time the invention

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was made to substitute the valve of Kennedy et al. for the valve in the modified apparatus of Reuter, because the valve of Kennedy et al. would have provided an intimate closing and pressure sealing between the vessels (see, e.g., column 1, line 40 to column 2, line 9).

12. Claims 14, 29, 30, 58, 62 and 73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reuter (US 3,632,173) in view of Markham et al. (US 3,591,525), as applied to claims 1, 2 and 18 above, and in further view of Krambrock et al. (US 4,301,880).

Regarding claims 14, 29 and 30, the combination of Reuter and Markham et al. fails to disclose another hose coupled to the dust collector and another storage bin and a manifold coupled in fluid communication with the dust collector and the hoses for placing the hoses in fluid communication with the dust collector on a selective basis.

Krambrock et al., however, teaches a conventional apparatus for transferring bulk materials (see FIG. 4, mistakenly described as FIG. 2 in column 3, line 58 to column 4, line 11; alternatively, FIG. 5, mistakenly described as FIG. 3 in column 4, lines 12-21), said apparatus comprising a dust collector, a first bin for storing a first material, a second bin for storing a second material, a first valve (18) for isolating the first bin from the dust collector on a selective basis and a second valve (19) for isolating the second bin from the dust collector on a selective basis; wherein a manifold (see FIG. 4, 5) comprises the first and second valves.

It would have been obvious for one of ordinary skill in the art at the time the invention was made to provide a second bin, second valve and manifold in the modified apparatus of Reuter, on the basis of suitability for the intended use, in order to allow for the conveyance of bulk materials from a plurality of sources to a single destination, as taught by Krambrock et al. In any event, the duplication of parts was held to be obvious. See MPEP 2144.04.

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Regarding claims 58, 62 and 73, Krambrock et al. further teaches a first pipe guide (i.e., conduit 11, FIG. 4; conduit 26, FIG. 5) in fluid with the first storage bin and a second pipe guide (i.e., conduit 12, FIG. 4; conduit 27, FIG. 5) in fluid communication with the second storage bin. The first ends, respectively, of the first and second pipe guides are secured to a wall of a dust collector. The first valve is mounted on the first pipe guide for placing the dust collector in fluid communication with the first storage bin on a selective basis and the second valve is mounted on the second pipe guide for placing the dust collector in fluid communication with the second storage bin on a selective basis. It would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the recited first and second pipe guide configuration in the modified apparatus of Reuter, because the configuration would allow for several components of loose material to be fed to the dust collector without impairing weighting accuracy, as taught by Krambrock et al. (see column 1, line 5 to column 2, line 11).

 Claims 32-39, 41-45 and 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reuter (US 3,632,173) in view of Krambrock et al. (US 4,301,880).

Regarding claims 32-39, Reuter (see FIG. 9) discloses an apparatus comprising:
a loading unit comprising a hopper (200) and transfer pot (10), wherein a third valve (29) is
provided for isolating the loading unit from the point of use (e.g., catalyst regenerator tower 236)
on a selective basis. Reuter, however, fails to disclose a first bin for storing a first material and a
second bin for storing a second material in fluid communication with the loading unit, wherein a
first valve isolates the first bin from the loading unit on a selective basis and a second valve
isolates the second bin from the loading unit on a selective basis, said first and second valves
included in a manifold. Reuter also fails to disclose that the hopper (200) is configured as a dust

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collector according to the recited configuration, wherein the dust collector is provided in fluid communication with the first and second storage bins, and wherein a vacuum producer generates a vacuum within the dust collector for drawing the material from the first and second storage bins into the dust collector.

Krambrock et al. teaches an apparatus comprising a dust collector comprising a filter in fluid communication with a vacuum producer (see FIGs. 4, mistakenly described as FIG. 2 in column 3, line 58 to column 4, line 11; alternatively, FIG. 5, mistakenly described as FIG. 3 in column 4, lines 12-21), a first bin for storing a first material, a second bin for storing a second material, a first valve (18) for isolating the first bin from the dust collector on a selective basis and a second valve (19) for isolating the second bin from the dust collector on a selective basis; wherein the first and second valves are included in a manifold (see figures).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the apparatus of Reuter to comprise the various elements claimed, because the provision of such elements for enabling the hopper to be refilled with materials from remotely located storage bins, without the discharge of material into the atmosphere, would have been considered conventional in the art of material transport, as evidenced by Krambrock.

Although Reuter does not disclose that the point of use (i.e., catalyst regenerator tower 236; FIG. 9) comprises part of a fluidized catalytic cracking unit, the unit has not been considered an element of the claimed apparatus. Note the recitation of an intended use of the system "for loading catalyst and/or additives into a fluidized catalytic cracking unit" in the preamble of the claim. The modified apparatus of Reuter would be capable of performing the intended use as recited in the preamble, and therefore the apparatus meets the claim. In addition,

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the recitations with respect to the manner of operating the apparatus or the materials worked upon by the apparatus do not impart patentable weight to the claim.

Regarding claim 41, Reuter discloses a controller electrically coupled to the third valve (29) for actuating the opening and closing of the valve (see control scheme, FIG. 10). It would have been obvious for one of ordinary skill in the art at the time the invention was made to similarly couple the remaining valves to the controller in the modified apparatus of Reuter, in order to provide for automated control of the entire material transfer process.

Regarding claim 42, Reuter discloses that the hopper (200) comprises a substantially cylindrical upper portion and an adjoining, substantially conical portion (see FIG. 9); and the transfer pot (10) comprises a substantially cylindrical upper portion adjoining the lower portion of the hopper, and a substantially conical lower portion adjoining the upper portion of the transfer pot (see FIG. 1 and 9). Accordingly, it would have been obvious for one of ordinary skill in the art at the time the invention was made to configure the dust collector and the transfer pot in the modified apparatus of Reuter to possess the recited shapes.

Regarding claims 43 and 45, Reuter (see FIG. 9) discloses that the hopper (200) and the transfer pot (10) each comprise a respective sidewall; wherein the hopper (200) adjoins the transfer pot (10) via a flexible nipple (19).

Regarding claim 44, Krambrock further teaches that the first and second bins are nonadjoining with the loading unit (see FIGs. 4, 5).

Regarding claim 80, Krambrock et al. further teaches a first pipe guide (i.e., conduit 11, FIG. 4; conduit 26, FIG. 5) in fluid with the first storage bin and a second pipe guide (i.e., conduit 12, FIG. 4; conduit 27, FIG. 5) in fluid communication with the second storage bin. The

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first ends, respectively, of the first and second pipe guides are secured to a wall of a dust collector. The first valve is mounted on the first pipe guide for placing the dust collector in fluid communication with the first storage bin on a selective basis and the second valve is mounted on the second pipe guide for placing the dust collector in fluid communication with the second storage bin on a selective basis. It would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the recited first and second pipe guide configuration in the modified apparatus of Reuter, because the configuration would allow for several components of loose material to be fed to the dust collector without impairing weighting accuracy, as taught by Krambrock et al. (see column 1, line 5 to column 2, line 11).

14. Claims 5 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reuter (US 3,632,173) in view of Markham et al. (US 3,591,525), as applied to claims 1 and 18 above, and further in view of Harpham (WO 00/48723); and

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reuter (US 3,632,173) in view of Krambrock et al. (US 4,301,880), as applied to claims 32 and 34 above, and further in view of Harpham (WO 00/48723).

Regarding claims 5 and 40, Reuter fails to disclose a volume chamber and a moisture trap for drying the air. Harpham, however, teaches that when compressed air is used, a dehumidifying apparatus may be connected before or after the compressor, if the material being conveyed is sensitive to moisture (see page 4, lines 12-13). It would have been obvious for one of ordinary skill in the art at the time the invention was made to provide a volume chamber/moisture trap for drying the air used to pressurize the loading unit in the modified apparatus of Reuter, because such means would have prevented the moisture in the air from affecting a moisture sensitive

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material being conveyed by the apparatus, as taught by Harpham. The examiner further takes

Official Notice that a volume chamber/moisture trap would have been considered a conventional dehumidifying apparatus in the art.

Regarding claim 28, the combination of Reuter and Markham et al. is silent as to the second location being no more than approximately 20 ft. from the first location. In any event, it would have been an obvious design choice for one of ordinary skill in the art at the time the invention was made to configure the second location to be no more than approximately 20 ft. from the first location in the modified apparatus of Reuter, on the basis of suitability for the intended use, e.g., to minimize the space occupied by the system. Also, the claimed distance would have been considered conventional (see Harpham, page 4, line 19 to page 5, line 3).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claims 1-46, 57, 71 and 72 are provisionally rejected on the ground of nonstatutory

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obviousness-type double patenting as being unpatentable over claims 1-5, 7-14, 16-21, 23-26, 28-33, 35-40, 42, 44, 45, 58 and 60-70 of copending Application No. 10/806,563 (see amendment filed December 14, 2009).

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Although the conflicting claims are not identical, they are not patentably distinct from each other because both the instant application and the copending application claim essentially the same apparatus. Application No. 10/806,563 similarly claims an apparatus comprising a loading unit in fluid communication with at least one bin and a fluidized catalytic cracking unit, said loading unit comprising a dust collector and a transfer pot of the instantly claimed configuration; a vacuum producer for generating a vacuum within the dust collector; and said transfer pot capable of being pressurized; said apparatus further comprising a manifold comprising valves for selectively providing fluid communication between the at least one bin and the loading unit. The loading unit is also contained in a cabinet.

16. Claims 58, 62, 73 and 80 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5, 7-14, 16-21, 23-26, 28-33, 35-40, 42, 44, 45, 58 and 60-70 of copending Application No. 10/806,563 in view of Krambrock et al. (US 4,301,880).

This is a provisional obviousness-type double patenting rejection.

Copending application 10/806,563 does not claim the recited first and second pipe guide configuration. Krambrock et al., however, teaches an apparatus (see FIG. 4 embodiment, mistakenly described in specification as FIG. 2 in column 3, line 58 to column 4, line 11:

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alternatively, the FIG. 5 embodiment, mistakenly described in specification as FIG. 3 in column 4, lines 12-21) comprising, a first storage bin and a second storage bin; wherein a first pipe guide (i.e., conduit 11 in FIG. 4; conduit 26 in FIG. 5) is in fluid with the first storage bin and a second pipe guide (i.e., conduit 12 in FIG. 4; conduit 27 in FIG. 5) is in fluid communication with the second storage bin. The first ends, respectively, of the first and second pipe guide are secured to a wall of a dust collector. The apparatus further comprises a first valve (18) mounted on the first pipe guide for placing the dust collector in fluid communication with the first storage bin on a selective basis and a second valve (19) mounted on the second pipe guide for placing the dust collector in fluid communication with the second storage bin on a selective basis. It would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the recited first and second pipe guide configuration in the apparatus of copending application 10/806,563, because the configuration would allow for several components of loose material to be fed to the dust collector without impairing weighting accuracy, as taught by Krambrock et al. (see column 1, line 5 to column 2, line 11).

Allowable Subject Matter

17. Claims 12, 13, 59-61, 63-67, 74-79 and 81-85 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Regarding claims 12 and 13, the prior art does not disclose or adequately teach the claimed apparatus comprising a dust collector, vacuum producer and transfer pot, wherein a plurality of load cells are provided for measuring the weight of the dust collector, the vacuum producer and the transfer pot, wherein the vacuum producer is in fluid communication with a

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source of pressurized air; said apparatus being provided with a controller electrically coupled to the plurality of load cells and the respective actuators of the recited first, second third and fourth valves for controlling the operation of said valves.

Regarding claims 59-61, 74-76 and 81-83, the prior art does not disclose or adequately teach the claimed apparatus comprising a dust collector, vacuum producer and transfer pot, wherein a first pipe guide is in fluid communication with a first storage bin and a second pipe guide is in fluid communication with a second storage bin; said first pipe guide and said second pipe guide each having a first end secured to a sidewall of the dust collector, and said first pipe guide and said second pipe guide and said second pipe guide each having a second end secured to one another.

Regarding claims 63-67, 77-79, 84 and 85, the prior art does not disclose or adequately teach the claimed apparatus comprising a dust collector, vacuum producer and transfer pot; wherein a first pipe guide is in fluid communication with a first storage bin and a second pipe guide is in fluid communication with a second storage bin; said first pipe guide and said second pipe guide each having a first end secured to a sidewall of the dust collector; and wherein a manifold is secured to a second end of the first pipe guide and a second end of the second pipe guide, said manifold being located within the dust collector.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER A. LEUNG whose telephone number is (571) 272-1449. The examiner can normally be reached on 9:30 am - 5:30 pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter D. Griffin can be reached on (571) 272-1447. The fax phone number for the

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organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jennifer A. Leung/ Primary Examiner, Art Unit 1797